

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

application of

Takashi KOBAYASHI et al.

Serial No.: 10/020,573

Group Art Unit:2826

Filed: October 31, 2001

Examiner: Greene, P.

For: SEMICONDUCTOR DEVICE

Certificate of Mailing

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Marc A. Rossi

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents P.O. Box 1450, Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. §1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached Form PTO-1449. Each item of information contained in the Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Information Disclosure Statement. Copies of the references listed on Form PTO-1449 and relevant portions of the search report are attached.

It is respectfully requested that the information be expressly considered during the prosecution of this application, that these references be made of record therein and appear among the "References Cited" on any patent to issue therefrom, and that an initialed copy of the PTO-1449 be returned to the undersigned.

Respectfully submitted,

Marc A. Ross

Registration No. 31,923

Date: 05/67/63

Attorney Docket No.: FUJI:200

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Docket Number (Optional) Application Number EUJI:200 10/020.573 INFORMATION DISCLOSURE CITATION Applicant(s) (Use several sheets if necessary) Takashi KOBAYASHI et al. Filing Date Group Art Unit October 31, 2001 2826 MAY 1 2 2003 U.S. PATENT DOCUMENTS EXAMINER DUDG DATE DOCUMENT NUMBER DATE NAME CLASS SUBCLASS D STEROPRIATE US 5,028,548 7/91 Nauyen 437 15 US 4/96 Okabe et al. 5,510,634 257 139 FOREIGN PATENT DOCUMENTS REF DOCUMENT NUMBER DATE COUNTRY CLASS SUBCLASS 145 30 EΡ 0 115 093 A2 8/84 EPO ΕP 0 671 769 A2 9/95 EPO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, 10.)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial If clistion considered, whether or not clistion is in conformance with MPEP Section 609; Draw line through clistion if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO-A820 (also form PTO-1449)

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SHEET 1

of 1







Application No: Claims searched: GB 0125466.3

26 to 28

Examiner: Date of search: T P Marlow 26 March 2003

Patents Act 1977: Further Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance	
х	26-28	EP 0115093 A2	PHILIPS - see breakdown voltage sustaining layer (12) above highly doped n or p-type layer (13), (see page 7 line 6 and page 7 line 27), and guard rings (1 to 6) surrounding well region (11) in Fig. 1; page 12 lines 12 to 16 mention breakdown voltage of less than 550 V for six guard rings
х	26-28	US 5028548	PHILIPS - see breakdown voltage sustaining layer (12) and guard rings (14) above layer (15); col. 4 line 56 to col. 6 line 25 give devices with breakdown voltages of 500V for six guard rings
Α		GB 2161649 A	TOSHIBA - see p ⁺ guard rings (14) surrounding p ⁺ well region (24) in n ⁻ layer (12) above p ⁺ layer (10) in Fig. 1
A		EP 0671769 A2	NIPPONDENSO - see guard rings (5) surrounding well region (3,9) above p ⁺ layer (10) and breakdown voltage sustaining layer (11) in Fig. 1
Α		US 5510634	NIPPONDENSO - see guard rings (6) surrounding well region (7) above p^+ layer (4) and breakdown voltage sustaining layer (3) in Fig. 1

Categories

- X Document indicating lack of novelty or inventive step A Document indicating technological background and/or state of the art.
- Y Document indicating lack of inventive step if combined with one or more other documents of same category.
- P Document published on or after the declared priority date but before the filing date of this invention.

& Member of the same patent family

E Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKCV-







Application No:

GB 0125466.3

Examiner:

T P Marlow

Claims searched:

26 to 28

Date of search:

26 March 2003

HIK

Worldwide search of patent documents classified in the following areas of the IPC7:

HOIL

The following online and other databases have been used in the preparation of this search report:

WPI, EPODOC, JAPIO